

REMARKS

Favorable reconsideration is respectfully requested.

The claims are 1-4.

Claims 1-4 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 6,284,438 (Choi et al.) in view of U.S. 6,072,006 (Bantu et al.)

This rejection is respectfully traversed.

In Bantu, the photoresist composition is formulated with an acid-labile resinous compound which is a partially crosslinked polymer. See, for example, ABSTRACT, 3:25-37, EXAMPLE 1 and EXAMPLE 2. Namely, the base resin formulated in the resist composition is a polymer having been subjected to a crosslinking reaction in advance.

In contrast thereto, it is essential in the claimed method, which is a process for the formation of a finely hole-patterned resist layer, that the base resin in the resist composition is an uncrosslinked polymer. In the case that the base resin becomes crosslinked, the crosslinking reaction takes place predominantly in the heat treatment in step (4). Namely, the unexpected discovery leading to the present invention is that, when the object is limited to the preparation of a hole-patterned resist layer of increased fineness, more improved results of hole-patterning can be accomplished by using a resist composition containing an uncrosslinked base resin than with a resist composition containing an already partially crosslinked base resin as taught by Bantu.

It is understood from 1:21 and 2:20 of Bantu that the by-product of a low boiling point, which is a dissociated protective group by interaction of an acid, is vaporized by heating and may be deposited as a contaminant onto the lens. The resist film also causes shrinkage by the influence thereof. The object of Bantu's method in using a crosslinking agent is to solve these problems by crosslinking resistance of the resin and to decrease formation of the by-product of low boiling point (2:27-37) so that, as a result, the resist film becomes less susceptible to shrinkage.

Accordingly, one skilled in the art of photolithography and informed of the Choi and Bantu references would not be motivated to formulate his photoresist composition with a polymer, which is uncrosslinked but has subsequent crosslinkability, as an acid-labile base resin in

place of the already partially crosslinked polymer taught in Bantu, in the process of Choi, which is silent on the use of an uncrosslinked but subsequently crosslinkable polymer as the base resin in the formulation of the photoresist composition.

For the foregoing reasons, it is apparent that the rejection on prior art is untenable and should be withdrawn.

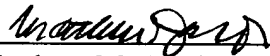
An Information Disclosure Statement accompanies.

No further issues remaining, allowance of this application is respectfully requested.

If the Examiner has any comments or proposals for expediting prosecution, please contact undersigned at the telephone number below.

Respectfully submitted,

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